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ABSTRACT

This program guide is intended for the implementation of a dental hygiene program in Florida secondary and postsecondary schools. The program guide describes the program content and structure, provides a program description, describes jobs under the program, and includes a curriculum framework and student performance standards for dental hygienist courses. The curriculum framework outlines major concepts and content, laboratory activities, program specifics, and intended outcomes; the student performance standards guide lists each standard and the behaviors expected to show mastery of each standard. The guide also provides a test item bank and information on the following: facilities, equipment and supplies, and safety; program implementation (accreditation, student admission requirements, student learning guide, and student organizations); teacher professional development and professional organizations; and instructional resources (a list of 150 print materials, 7 reports in the ERIC database, 5 audiovisual aids, 7 journal articles, and the Florida Educational Information Service with a list of its services.) Appended to the program guide is a sample student learning guide that includes program title, intended outcome, learning activities, information sheets, self-check with answers, written test with answers, and a performance test. (KC)

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FLORIDA VOCATIONAL PROGRAM GUIDE FOR

DENTAL HYGIENE

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For further information, contact
Bureau of Vocational Program and Staff Development
Division of Vocational, Adult, and Community Education
Department of Education
Knott Building
Tallahassee, FL 32399
(904) 488-0484

FLORIDA VOCATIONAL PROGRAM GUIDE FOR

DENTAL HYGIENE

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education
Bureau of Vocational Program and Staff Development

July 1989

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Special thanks is extended to the following individuals for making contributions to the content and review of this product:

James Flatley, Director
Dental Health Services
Palm Beach Community College
4200 Congress Avenue
Lake Worth, FL 33461

Susan Kass
Dental Hygiene Program
Miami-Dade Community College
950 NW 20th Street
Miami, FL 33127

Kathy Zawada Smith
Valencia Community College
P. O. Box 3028
Orlando, FL 32802

Mindy Adshead
Pensacola Junior College
1000 College Boulevard
Pensacola, FL 32504

Lee Weisenborn
Tallahassee Community College
444 Appleyard Drive
Tallahassee, FL 32304

Victoria Seller
Santa Fe Community College
P. O. Box 1530
Gainesville, FL 32602

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INTRODUCTION

In addition to the Program Implementation Guide, which can be applied to all vocational programs in Florida, this program guide has been developed specifically for the Dental Hygiene program to provide information that will be useful to local school district and community college administrators, faculty and instructors, program advisory committee members, regional coordinating councils, and others charged with the responsibility of offering vocational educational programs. The final planning and evaluation of any educational program, however, must be done within the context of local conditions. This publication will serve to identify the major concerns that should be considered in the organization, operation, and evaluation of a vocational education program.

Vocational education has evolved to meet the needs of students desiring to pursue a selected career or vocation. In general, vocational education is designed to provide programs, services, and activities that are realistic in light of present and future employment opportunities. In recent years, applications of science and technology have expanded rapidly, increasing the education and training required of personnel. The new technologies require many additional technical support staff to carry out both standardized and specialized procedures.

Today, vocational education is an increasingly viable option for students. The Florida Department of Education shares with business, government, and industry the determination to provide opportunities for upward mobility to as many Floridians as possible. In order to do this, it is necessary both to create exemplary career educational programs and to make those programs consistent throughout the state.

State Board of Education Administrative Rule 6A-10.24: Articulation between universities, community colleges, and school districts outlines steps and guidelines that will bring about a systematic interrelationship between Florida institutions offering similar or related courses and programs. The rule states, in part, that:

> When a student transfers among postsecondary vocational-technical centers, community colleges, and universities, the receiving institution shall award credit for courses satisfactorily completed at the previous institutions when the courses are judged to be equivalent to courses offered at the receiving institution.

This program guide helps ensure that equivalency. Throughout Florida, vocational programs, if implemented according to the criteria described in this document, will help many citizens fill an important place in our state and national work force.

PROGRAM CONTENT AND STRUCTURE

The content of this vocational program is based on occupational tasks and employability skills required on the job in the field of dental hygiene. The criteria used for evaluating student performances are based on job performance standards.

This section includes a description of the dental hygiene occupation, a list of occupational tasks, and the Florida Curriculum Framework and Student Performance Standards (SPSs) for the Dental Hygiene Education Program. Local education agencies (LEAs) may modify SPSs to meet local needs; the local school board must approve a set of SPSs, either those suggested by the state or ones adapted locally.

Occupational Description

The following description of dental hygienists' tasks has been abstracted from the Department of Professional Regulation, Board of Dentistry, Laws and Rules Relating to the Practice of Dentistry; Rule 21-G and Chapter 466, Florida Statutes:

> Dental hygienists may remove calculus deposits, accretions, and stains from exposed surfaces of the teeth and from the gingival sulcus; perform root planing and curettage; expose dental x-ray films; apply topical preventive or prophylactic agents; and perform all tasks delegable by the dentist in accordance with S.466.024.
>
> Dental hygienists may perform their duties in the office of a licensed dentist, in public health programs and institutions of the Department of Health and Rehabilitative Services under the general supervision of a licensed dentist, or upon a patient of record of a dentist who has issued a prescription for the services of a dental hygienist, in licensed public and private health facilities; other public institutions of the state and federal government; public and private educational institutions; the home of a nonambulatory patient; and other places in accordance with the rules of the board.
>
> Dental hygienists may have differing emphases in their task responsibilities, based upon the Board of Dentistry's determination of which tasks are to be performed under supervision.

See Section 21G-16.003, Supervision, of the Department of Professional Regulation: Board of Dentistry, Laws and Rules Relating to the Practice of Dentistry for a complete list of possible remediable tasks performed by dental hygienists under general, direct, or indirect supervision.

Job Title and Codes

Dental Hygienist
078.361-010 (Dictionary of Occupational Titles)
01012402 (Florida Occupational Info System)
0317.010200 (Florida CIP)

Certification Requirements

Following their training, students must take the National Board of Dental Hygiene Certification Examination and the Florida Dental Hygiene licensure examination. Thus, the program should meet the requirements of the Commission on Accreditation of the American Dental Association, and be approved by the Florida State Board of Dentistry.

The typical steps for meeting the requirements are as follows:

Step 1. The student must graduate from an accredited dental hygiene school, approved by the American Dental Association, with either an Associate Science diploma, Bachelor of Science degree, or a certificate from a two or more year program.

Step 2. The student must then take the National Board Exam, administered by the American Dental Association, within ten years of the date of application.

Step 3. Following successful completion of the National Board Exam, the student must apply to take the State Board Exam in Dental Hygiene. To apply, he or she will need to present credentials. Passing the State Board Exam allows one to obtain the state license. (Contact the Department of Professional Regulation, Board of Dentistry, for additional information.)

Curriculum Framework and Student Performance Standards*

The Health Occupations Program Area is a group of planned, specialized instructional programs structured to enable students to enter employment, to make career progress, and to refine prescribed competencies required for employment in a cluster of occupations or in a specific occupation chosen as a career objective.

The Dental Hygiene program includes learning experiences that may combine courses, units of instruction, and practical experiences that prepare students for employment as dental hygienists or provide supplemental training for persons previously or currently employed in this occupation.

Program objectives should be consistent with the Vocational Education Program Courses Standards as approved by the Florida State Board of Education. Provided in the following pages are the Curriculum Framework and Student Performance Standards for Dental Hygiene courses as listed in the Vocational Education Program Courses Standards: Health Occupations (Florida Department of Education, Division of Vocational, Adult, and Community Education).

***NOTE:** Since the Curriculum Framework and Student Performance Standards are revised yearly, please check with your vocational dean or director for a current version each year.

CURRICULUM FRAMEWORK
FLORIDA DEPARTMENT OF EDUCATION

PROGRAM AREA: Health Occupation

EFFECTIVE DATE: July, 1989

PROGRAM TITLE: Dental Hygiene

CODE NUMBER: Secondary _____ Postsecondary _____

Florida CIP 0317.010200

SECONDARY SCHOOL CREDITS: ___ COLLEGE CREDITS: x POSTSECONDARY ADULT VOCATIONAL CREDITS: ____

APPLICABLE LEVELS: __7-9 __9-12 __Postsecondary Adult Vocational
x Postsecondary Vocational
__Other _____

CERTIFICATION COVERAGE:

I. **Major Concepts/Content.** The program is designed to prepare students for employment as dental hygienists (DOT # 078.361-010) or to provide supplemental training for persons previously or currently employed in this occupation.

The content includes, but is not limited to, office management, nutrition, basic dental laboratory procedures, dental and general anatomy, dental hygiene instrumentation, microbiology, dental pharmacology and anesthesia, chairside assisting, dental office emergencies, dental radiography, employability skills, ethics and jurisprudence, dental materials, preventive dentistry, expanded functions, patient assessment and services, and community health.

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

II. **Laboratory Activities.** Simulation activities and clinical laboratory experiences with clinical patients are integrated with the didactic portion of the program. Dental operatory equipment is essential.

III. **Special Note.** The Student American Dental Hygienists Association is an appropriate vocational student organization for providing leadership training experience and for reinforcing specific vocational skills. When provided, these activities are considered an integral part of this program.

The student should be prepared to take the National Board of Dental Hygiene Examination and the Florida Dental Hygiene licensure examination. The program should meet the requirements of the Commission on Accreditation of the American Dental Association and be approved by the Florida State Board of Dentistry.

Upon successful completion of this program, the student will have earned an Associate degree.

IV. **Intended Outcomes.** After successfully completing this program, the student will be able to:

01. Perform general office procedures.
02. Identify structures and explain functions and pathologies of dental and general anatomy.
03. Identify, describe, and maintain dental instruments and equipment.
04. Identify principles of microbiology and disease prevention and perform infection control procedures.
05. Identify the functions of pharmacology and anesthesia as they relate to dentistry.
06. Perform chairside assisting and expanded functions.
07. Assist in administering dental office emergency care and cardiopulmonary resuscitation.
08. Identify and perform dental radiographic procedures.
09. Identify properties and uses of dental materials and manipulate them.
10. Describe principles of preventive dentistry and perform preventive dentistry techniques.
11. Describe the legal and ethical responsibilities of the dental health care worker.
12. Demonstrate employability skills.
13. Perform patient assessment.
14. Perform direct patient services.
15. Implement and evaluate community health interventions and research activities.
16. Demonstrate knowledge of sexually transmitted diseases, including AIDS.

STUDENT PERFORMANCE STANDARDS | EFFECTIVE DATE: July, 1989

PROGRAM AREA: Health Occupations | SECONDARY NUMBER: _____

PROGRAM TITLE: Dental Hygiene | POSTSECONDARY NUMBER: 0317.010200

01.0 PERFORM GENERAL OFFICE PROCEDURES--The student will be able to:

- 01.01 Maintain appointment control.
- 01.02 Maintain an active recall system.
- 01.03 Prepare and maintain accurate patient records.
- 01.04 Prepare and maintain patient financial records and collect fees.
- 01.05 Prepare and maintain office financial records.
- 01.06 Prepare and maintain dental office inventory control and purchasing.
- 01.07 Demonstrate public relations responsibilities of the secretary/receptionist.
- 01.08 Demonstrate skills with office equipment.
- 01.09 Maintain the office environment.
- 01.10 Receive and dismiss patients and visitors.

02.0 IDENTIFY STRUCTURES AND EXPLAIN FUNCTIONS AND PATHOLOGIES OF DENTAL AND GENERAL ANATOMY--The student will be able to:

- 02.01 Identify structures and functions of head and neck anatomy including bones, muscles, sinuses, salivary glands, nerves, and vessels.
- 02.02 Identify the embryonic development of the head, oral cavity, and teeth.
- 02.03 Identify teeth and their landmarks.
- 02.04 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
- 02.05 Recognize and describe oral pathological conditions.

03.0 IDENTIFY, DESCRIBE, AND MAINTAIN DENTAL INSTRUMENTS AND EQUIPMENT--The student will be able to:

- 03.01 Identify various types, functions, and operations of dental operatory and laboratory equipment.
- 03.02 Identify types and functions of various dental instruments.
- 03.03 Maintain dental operatory equipment and instruments.

04.0 IDENTIFY PRINCIPLES OF MICROBIOLOGY AND DISEASE PREVENTION AND PERFORM INFECTION CONTROL PROCEDURES--The student will be able to:

- 04.01 Differentiate between pathogenic and non-pathogenic microorganisms.
- 04.02 Describe pathogens and modes of disease transmission.
- 04.03 Differentiate between aseptic and non-aseptic environments.
- 04.04 Perform aseptic handwashing technique.
- 04.05 Describe methods of disinfection and sterilization.

05.0 IDENTIFY THE FUNCTIONS OF PHARMACOLOGY AND ANESTHESIA AS THEY RELATE TO DENTISTRY--The student will be able to:

05.01 Identify drug requirements, agencies, and regulations.
05.02 Prepare and record a drug prescription.
05.03 Identify drug actions, side effects, indications, and contraindications.
05.04 Identify common drugs used in dentistry.
05.05 Prepare and apply a topical anesthetic agent.
05.06 Identify properties of anesthetics.
05.07 Prepare syringes for the administration of local anesthetics.
05.08 Monitor nitrous oxide-oxygen conscious sedation.

06.0 PERFORM CHAIRSIDE ASSISTING AND EXPANDED FUNCTIONS--The student will be able to:

06.01 Apply principles of four handed dentistry.
06.02 Evacuate and maintain the operating field.
06.03 Perform expanded functions as permitted by the Florida Board of Dentistry.
06.04 Assemble instruments and assist in general and specialty dental procedures.

07.0 ASSIST IN ADMINISTERING DENTAL OFFICE EMERGENCY CARE AND CARDIOPULMONARY RESUSCITATION--The student will be able to:

07.01 Describe dental office emergencies and their prevention and treatment.
07.02 Assist and maintain medical emergency care, including cardiopulmonary resuscitation.

08.0 IDENTIFY AND PERFORM DENTAL RADIOGRAPHIC PROCEDURES--The student will be able to:

08.01 Describe the history, physics, and biological effects of ionizing radiation.
08.02 Identify parts of the X-ray machine including accessories.
08.03 Demonstrate radiologic health protection techniques.
08.04 Perform darkroom/processing procedures and mix solutions.
08.05 Expose radiographs utilizing intraoral/extraoral techniques.
08.06 Identify radiographic anatomical landmarks.
08.07 Mount radiographic surveys.
08.08 Maintain unexposed film inventory and storage.

09.0 IDENTIFY PROPERTIES AND USES OF DENTAL MATERIALS AND MANIPULATE THEM--The student will be able to:

09.01 Identify properties and uses of gypsum and manipulate it.
09.02 Identify properties and uses of restorative materials and manipulate them.
09.03 Identify properties and uses of dental cements and manipulate them.
09.04 Identify properties and uses of impression materials and manipulate them.

09.05 Identify properties and uses of acrylics and/or thermoplastics and manipulate them.
09.06 Identify properties and uses of waxes and manipulate them.
09.07 Perform dental laboratory procedures, including the fabrication of casts, custom trays, and/or temporary crowns and bridges.

10.0 DESCRIBE PRINCIPLES OF PREVENTIVE DENTISTRY AND PERFORM PREVENTIVE DENTISTRY TECHNIQUES--The student will be able to:

10.01 Identify applicable methods of preventive dentistry and instruct patients on their implementation.
10.02 Prepare setup for oral prophylaxis and anticariogenic treatments.
10.03 Identify the elements of nutrition, basic food groups, and acceptable diets.
10.04 Identify deficiencies that manifest symptoms in the oral cavity and describe relevant therapies.
10.05 Formulate and present diets to address specific dental needs.

11.0 DESCRIBE THE LEGAL AND ETHICAL RESPONSIBILITIES OF THE DENTAL HEALTH CARE WORKER--The student will be able to:

11.01 Define commonly used legal vocabulary relating to dentistry.
11.02 Describe legal and ethical considerations/obligations in the dental team-patient relationship.
11.03 Explain risk management.

12.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

12.01 Conduct a job search.
12.02 Secure information about a job.
12.03 Identify documents that may be required when applying for a job.
12.04 Complete a job application.
12.05 Demonstrate acceptable job interview behavior.
12.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other persons.
12.07 Identify acceptable work habits.
12.08 Demonstrate knowledge of how to make job changes appropriately.
12.09 Demonstrate acceptable employee health habits.

13.0 PERFORM PATIENT ASSESSMENT--The student will be able to:

13.01 Take, record, and correlate the medical/dental history with a dental hygiene treatment plan and services to be performed.
13.02 Recognize all contraindications to dental treatment in a medical and dental history and initiate remedial actions or referrals.
13.03 Take, record, and correlate vital sign observations with a dental hygiene treatment plan and services to be performed.
13.04 Perform, record, and correlate extraoral and intraoral examination findings with a dental hygiene treatment plan and patient services to be performed.
13.05 Conduct a complete periodontal examination, including probing, radiographic interpretation, mobility assessment, and tissue description.

13.06 Consult with dentists and physicians to verify dental and medical information and develop the treatment plan to be implemented.
13.07 Observe and record existing restorations, conditions, and pathologies.
13.08 Interpret and correlate dental radiographs and dental charting with the dental hygiene treatment plan.
13.09 Assess the patient's nutritional status and prepare recommendations.
13.10 Perform soft tissue reassessment, evaluate the effects of initial dental hygiene therapy, and make appropriate referrals.
13.11 Recognize systemic diseases from oral manifestations.

14.0 PERFORM DIRECT PATIENT SERVICES--The student will be able to:

14.01 Differentiate between deposits and other causes of tooth surface roughness and check for calculus removal.
14.02 Scale teeth, removing accretions with hand instruments.
14.03 Root plane to remove altered cementum.
14.04 Manipulate mechanical instruments, such as ultrasonics and prophy-jet, for deposit removal.
14.05 Perform soft tissue curettage with appropriate instruments.
14.06 Apply desensitizing agents where applicable.
14.07 Clean and polish removable appliances.
14.08 Direct patient in all home therapies to maintain and restore soft tissue health.
14.09 Provide dietary counseling for health maintenance and specific healing needs.
14.10 Provide recommendations for patient use of caries prevention agents.

15.0 IMPLEMENT AND EVALUATE COMMUNITY HEALTH INTERVENTIONS AND RESEARCH ACTIVITIES--The student will be able to:

15.01 Demonstrate knowledge of assessment, planning, implementation, and evaluation of community health interventions.
15.02 Formulate and analyze research methodologies for community health interventions.
15.03 Interpret research findings in scientific literature.
15.04 Apply research findings to dental hygiene care delivery.
15.05 Apply statistical analysis to health trends and community interventions.

16.0 DEMONSTRATE KNOWLEDGE OF SEXUALLY TRANSMITTED DISEASES, INCLUDING AIDS--The student will be able to:

16.01 Distinguish between fact and fallacy about the transmission and treatment of sexually transmitted diseases.
16.02 Identify community resources and services available to the victims of sexually transmitted diseases.
16.03 Identify at-risk behaviors which promote the spread of AIDS and the public education necessary to combat the spread of sexually transmitted diseases.
16.04 Apply infection control techniques designed to prevent the spread of sexually transmitted diseases to the care of all patients following the Centers for Disease Control (CDC) guidelines.

Related Frameworks

See the current version of the Vocational Education Program Courses Standards: Health Occupations (Florida Department of Education, Division of Vocational, Adult, and Community Education) for Curriculum Standards and Student Performance Standards for the following additional programs in the dental care area:

Dental Assisting
Dental Laboratory Assisting
Dental Laboratory Technology

Test Item Bank

A bank of test items for dental hygiene may be developed soon under the auspices of the Florida Department of Education. Test items will be keyed to Student Performance Standards. For more information, please contact the Division of Vocational, Adult, and Community Education, Dissemination and Diffusion Section, Knott Building, Tallahassee, Florida 32399, (904) 488-0405.

FACILITIES

This section includes the Florida State Department of Education facilities design criteria, equipment and supplies, and safety considerations for the Dental Hygiene program.

Design Criteria

When designing new or renovated facilities, planners for the Dental Hygiene program should provide space and learning stations to meet program objectives. Florida State Board of Education Rule 6A-2.032 specifies the size of space and occupant design criteria that school districts and community colleges must follow in planning and designing facilities for Health Occupations Programs.

Listed below are the minimum, normal, and maximum space requirements for Dental Hygiene instructional programs.

DEDICATED SPACE
(square footage)

	Per Student			Total (based on 15 students)		
	Min.	Normal	Max.	Min.	Normal	Max.
Classroom	33	35	37	500	525	550
Laboratory	90	95	100	1,350	1,425	1,500
Darkroom				55	60	65
Reception				340	360	380
Storage, Material				120	125	130
X Ray				125	135	145
Teacher Planning Office				100	105	110
Required Program Space				2,590	2,735	2,880

District schools and community colleges desiring to vary from size and occupant design criteria may do so by providing justification in the educational specifications document which is subject to approval by the Office of Educational Facilities Planning and Design.

Equipment

Equipment should be provided and utilized to enable the student to achieve the objectives of the program. As much as possible, such equipment should be of the type and quality used in the field.

Dental Hygiene students should be aware that they may be required to purchase, borrow, or rent instrument kits.

Audiovisual Equipment

Chalkboard/Corkboard
Projection screen, 60 inch minimum
Projector, 35mm film loop
Projector, 35mm film strip
Projector, overhead
Tape player, videocassette, with monitor

Equipment for Clinical Training

Bench engine
Chair, dental patient, with unit and operator's stool
Cups, paper
Emergency equipment, including oxygen
Floss, dental
Glasses, safety
Glow-germ kit
Handpieces, high- and slow-speed (see also Instrument Kit, below)
Lathe, dental
Light, operating
Microscopes
Models of teeth and mouth
Molds for plaster and wax
Operatories, one per ten students
Oral evacuation system
Replicas and charts, skeletal and anatomic, illustrating the anatomy and physiology of the mouth
Resources, clinical photography
Rubber dam instruments and supplies
Samples of:
- Crowns
- Dentures
- Inlays
- Orthodontic retainers
- Partials
- Patient records

Specialty instruments: endodontic, surgical, periodontic, pedodontic, etc.
Sterilizing equipment
Toothbrushes
Trimmer, model
Vibrators, dental

Equipment for Radiographic Training

Darkroom capacity/equipment such as:
- Film
- Film-dryer hanging rack

Film duplicator
Processing tank
Safe light
Timer
Viewbox units
Water temperature control
Work surface
Dental radiography units
Film holders
Film mounts
Lead patient aprons and mechanical aids for making acceptable radiographs
Lead shielding or comparable protection units
Lead thyroid collars
Teaching mannequin

The Instrument Kit

Dental hygiene students should be made aware that they are required to purchase, rent, or borrow instrument kits. The following is one example of what such a kit might contain:

Apron, lab
Bottle, liquid soap, small
Bottle for dispensing disclosing solutions, small
Bowls, rubber (2)
Burrs, finishing, assorted round and flame
Cavitron tip, TFL 10
Chain, patient bib
Contra angle, right-angle
Cuff, blood pressure
Curettes, Gracey 1/2, 11/12, and 13/14
Explorers: 3 CH and 11/12
Files, Hirschfeld, one each 3/7 and 5/11
Film, radiography
Floss with holder
Gloves (box)
Handpiece, four-hole air-driven slow-speed, with appropriate prophy angle, cups, and brushes
Knife, lab
Masks (box)
Mirror
Probe, 23/ow explorer
Ruler, T-bevel, 6"
Scaler, H6/7
Scissors, suture, small
Spatulas (2)
Stethoscope
Stone, ceramic sharpening
Stones, wedge-shaped, one each Arkansas and India
Thermometer, oral
Trays, reusable metal rimlock impression, 2 each small, medium, and large
Typodont
Uniforms, 2 each top, lab coat, and slacks

Wax carving supplies:
- Carving knife #6R (green handle)
- Carving wax, Columbia Dentoform CB 12, one box
- Boley gauge or millimeter ruler
- Small discoid or cleoid carver
- Colored pencils: red, blue, and green

Wristwatch with second hand or pulses

Safety

The Florida State Board of Education establishes rules for the operation of public schools. Part III, Section B, Chapter 6A-2 of the State Board of Education Rules contains the standards for existing educational facilities. Subsections deal with the entire school facility in regard to such topics as electrical equipment; flammable materials; climate control and ventilation equipment; structural, material, and sound hazards; fire extinguishing equipment; surface finishes, decorations, and hazardous materials; storage and separation of spaces; fire doors, smoke doors, and smoke partitions; emergency evacuation drills; play area and traffic safety; stairs and fire escapes; exit access; general lighting/illumination; and other standards.

In dental health areas, the educational institutions may also include safety policies and procedures regarding student use of equipment, tools, supplies, and materials.

PROGRAM IMPLEMENTATION

This section includes information that may help instructors plan the implementation of the dental hygiene program: accreditation, student admission requirements, sample student learning guides, and student organization participation.

Accreditation

The Commission on Dental Accreditation of the American Dental Association has sole authority and responsibility for accrediting education programs in dental laboratory technology, dental hygiene and dental assisting, predoctoral and advanced dentistry, and other recognized dental specialties.

The accreditation process provides evidence that such education programs are of high quality and ultimately lead to quality dental patient care.

The Commission makes extensive use of consultants and an on-site evaluation team to ensure that accredited programs meet minimum educational standards. Accreditation standards address areas such as educational setting, community resources, administration, financial support, curriculum, admissions, faculty, facilities, learning resources, student services, and assessment of outcomes.

Applying for accreditation is a voluntary process. There are approximately 200 Commission-accredited dental hygiene programs in the United States. In addition, there are about 290 accredited dental assisting programs.

(For specific information about meeting the standards for accreditation, write to the Commission on Dental Accreditation of the American Dental Association to request "Accreditation Standards for Dental Hygiene Education Programs.")

Student Admission Requirements

Students enrolled in the Dental Hygiene program should be able to benefit from the instructional content with reasonable expectations for employment as dental hygienists.

The Dental Hygiene program is offered to students at the postsecondary adult level. Individual institutions may have slightly varying requirements and recommendations for applicants.

Student Learning Guides

As mentioned in the Florida Vocational Education Program Implementation Guide, competency-based vocational education (CBVE) is the most appropriate instructional approach to teaching students in the Dental Hygiene program to become competent in the field. In order to implement CBVE effectively and efficiently, you and the students should have access to competency-based instructional materials, such as student guides or modules.

A sample student learning guide is provided (see Appendix) as an example for you to use when developing or adapting a set of learning guides or modules. This sample guide is not complete, but presents basic components of a competency-based student learning guide: an introduction, objectives, list of resources, learning activities, information sheets, self-check and answer sheets, activity sheets, a written test, and a performance checklist. Answer keys to the written test are included for the instructor version of the learning guide.

The **introduction** includes the intended outcome and Student Performance Standards (SPSs) for which the guide is developed, and an introduction to the guide, addressing why this topic is important to study and what the guide is about. Other information such as the relationship between the guide and other guides can also be included on this sheet.

The **objectives** include both knowledge and performance objectives if the SPS calls for hands-on performance such as "irrigate plants" but only knowledge objectives if the SPS requires knowledge-oriented competencies such as "describe woody and herbaceous plants."

The list of **resources** includes instructional materials the students should use to study, and tools and supplies students should have access to in order to complete the guide.

The **learning activities** include a list of steps students should take in order to master the objectives.

You may need to develop an **information sheet** if the existing instructional materials do not cover the content well enough for students to master the objectives.

The **self-check** is a set of questions designed to help students review what they have studied.

The **activity** sheet is designed to help students practice hands-on tasks for performance objectives. If the SPS doesn't require hands-on activity, this sheet is not included in the learning guide.

The **written test** is designed to measure the student's level of achievement on the knowledge objectives.

A **performance checklist** is designed to be used by the instructor/evaluator to assess the student's level of achievement on the performance objectives.

The student learning guide may consist of two or more sets of these components if the objectives need to be divided into two or more groups. Whatever format you use for the SLG, these components should be included in order to incorporate instructional events such as the following:

1. gain attention
2. state objective
3. recall prerequisite
4. provide instructional stimulus
5. provide learning guidance
6. elicit performance
7. provide feedback

8. assess performance
9. enhance retention and transfer

Student Organization Participation

Vocational student organizations operate pursuant to federal and state laws which authorize them as viable components of vocational education programs. Both federal regulations and the Florida State Board of Education regulations authorize vocational student organizations as an integral part of the vocational education program.

Vocational student organizations associated with this program are the Health Occupations Students of America, Inc., and the Student American Dental Hygienists Association.

Health Occupations Students of America (HOSA)

The Florida Association of HOSA is specifically designed for students enrolled in health occupations education programs. The HOSA activities are included as an integral part of the health occupations education curricula, and complement and enrich instruction in each program area.

HOSA stresses student participation in cooperatively planning and conducting projects involving community service, career planning, social service, parliamentary procedure, public speaking, and program-related, competency-based competitive events.

HOSA stresses the recognition and promotion of the worth and dignity of each member and the development of both leadership and "followship" skills. The importance of maintaining health and striving for increased student knowledge and skill in health occupations education programs is inherent in the HOSA philosophy. Participation in HOSA helps to foster integrity, enthusiasm, and devotion to a career in the health occupations.

Involvement in HOSA will assist students in assuming responsibility, working cooperatively, and becoming more proficient in their chosen health occupations careers. The national HOSA motto is: "The Hands of Youth Mold the Health of Tomorrow."

Student American Dental Hygienists Association (SADHA)

The objectives of SADHA are to cultivate, promote, and sustain the art and science of dental hygiene; to represent and safeguard the common interests of the members of the dental hygiene profession; and to contribute toward the improvement of public health.

Although the activities of SADHA vary from one school organization to another, many of them include (but are not limited to):

- speaker programs on topics relating to dental health
- participation in community affairs such as health and science fairs

- celebration of national dental health awareness days such as National Dental Hygiene Week in October
- volunteer services in the community
- social functions with other dental hygiene students.

Most organizations are also involved with their state and local dental hygiene associations. Special participatory activities may include any one of the above as well as the state's annual association meeting, which usually offers programs specifically for students.

For SADHA membership inquiries, contact the national office:

American Dental Hygienists Association
Membership Services Division
444 North Michigan Avenue, Suite 3400
Chicago, Illinois 60611

Instructor Standards

The following description of instructor standards has been abstracted from the "Accreditation Standards for Dental Hygiene Education Programs" of the American Dental Association, Commission on Dental Accreditation:

STANDARD 7 - FACULTY

The program shall be staffed by faculty who are well qualified in curricular subject matter, dental hygiene functions, and educational methodology.

7.1 QUALIFICATIONS: Dental hygiene faculty members must have a background in and current knowledge of dental hygiene, the specific subjects they are teaching, and educational methodology.

Dental hygiene faculty members must have qualifications which include advanced study in subjects they teach. Faculty backgrounds must include completion of courses in educational theory and practice. Individuals who do not have this background must be continuing their education in these areas.

Faculty members should have credentials at least one level higher than the degree to be granted to their students or they should be currently working on attaining such a degree.

Faculty who provide preclinical and clinical instruction must have knowledge of current concepts of dental hygiene, clinical instruction and evaluation, proficiency in clinical dental hygiene, and clinical practice experience. The dentist's role during clinical sessions must be defined. Dentists and dental hygienists providing supervision of students' clinical procedures must have qualifications which comply with the state dental practice act.

7.2 NUMBER: The number of full-time equivalent faculty positions shall be sufficient to implement program objectives.

7.3 APPOINTMENTS: There must be a core of qualified full-time faculty.

7.4 SALARIES: Financial allocations for the program shall assure that the program will be in a competitive position to recruit and retain qualified faculty.

Updating

The following updating requirements have also been abstracted from the "Accreditation Standards for Dental Hygiene Education Programs" and Sections 466.0135 and 466.014 of the Florida Statutes:

7.5 PROFESSIONAL DEVELOPMENT: Opportunities must be provided for continued professional development of dental hygiene faculty.

All full-time faculty shall have opportunities for pursuing study in education and research methodology as well as in their subject areas of assigned teach-

ing responsibility. Release time must be provided for professional associaton activities, research, publishing, and/or clinical practice experience. Each faculty member should be provided release time and financial support to attend at least one national or regional conference or workshop related to dental hygiene education each year.

Formal inservice programs should be held regularly at the institution or at other locations. The program administrator should institute and develop inservice workshops designed to involve faculty in solving specific program problems.

7.6 FACULTY EVALUATION: A formal, objective system of faculty evaluation must be used to promote professional and program development.

The faculty evaluation system should include student, administration, and peer evaluation to help identify areas of strengths and weaknesses for each faculty member, including the program administrator. These evaluations should be communicated to each faculty member.

Related Professional Organizations and Support Services

AMERICAN ASSOCIATION OF DENTAL SCHOOLS
1625 Massachusetts Avenue, Northwest
Washington, DC 20036

AMERICAN DENTAL ASSOCIATION
COMMISSION ON DENTAL ACCREDITATION
AND BUREAU OF HEALTH EDUCATION
211 East Chicago Avenue
Chicago, IL 60611

AMERICAN DENTAL HYGIENISTS ASSOCIATION AND
STUDENT AMERICAN DENTAL HYGIENISTS ASSOCIATION
444 North Michigan Avenue, Suite 3400
Chicago, IL 60611

BOARD OF DENTISTRY
DEPARTMENT OF PROFESSIONAL REGULATION
130 North Monroe Street
Tallahassee, FL 32399-0750

FLORIDA DENTAL HYGIENISTS ASSOCIATON
(affiliate of American Dental Hygienists Associaton)
201 Park Place, Suite 300
Altamonte Springs, FL 32701

FLORIDA VOCATIONAL ASSOCIATION
1420 North Paul Russell Road
Tallahassee, FL 32301

NATIONAL INSTITUTE OF DENTAL RESEARCH
NATIONAL INSTITUTES OF HEALTH
Westwood Building, Room 522
Bethesda, MD 20892

HEALTH OCCUPATIONS STUDENTS OF AMERICA (HOSA)
Myra Saley
Department of Education
Knott Building
Tallahassee, FL 32399

HEALTH OCCUPATIONS EDUCATORS ASSOCIATION OF FLORIDA
Dr. Larry Hudson, President
University of Central Florida
Orlando, FL 32816

HEALTH OCCUPATIONS EDUCATION DIVISION
AMERICAN VOCATIONAL ASSOCIATION
1410 King Street
Alexandria, VA 22314

INSTRUCTIONAL RESOURCES

The following resources are grouped by media: Print, ERIC Data Base, Journal Articles, Audiovisual Aids, Institution-Developed Materials, and FEIS Services. Gathered through a search of data bases and through contact with several leading instructors in dental hygiene programs, the materials have not been extensively reviewed nor selected by a set of criteria; thus, they should be considered "suggested" rather than "recommended."

Print

Anderson, Pauline, and B. Susan Clifford. Dental Radiology. 2d ed. Orlando: Delmar, 1982.

Brand and Isselhard. Anatomy of Orofacial Structures. 3d ed. St. Louis: C. V. Mosby, 1985.

Craig, R. G., W. J. O'Brien, and J. M. Powers. Dental Materials: Properties and Manipulation. 4th ed. St. Louis: Mosby, 1986.

DeLyre, W. R. Essentials of Dental Radiography for Dental Assistants and Hygienists. Old Tappan, N.J.: Prentice Hall Press, 1980.

Ehrlich, Ann. Nutrition and Dental Health. Orlando: Delmar, 1987.

Fedi, Peter. The Periodontic Syllabus. Philadelphia: Lea and Febiger, 1989.

Fuller, J. L. and G. E. Denehy. Concise Dental Anatomy. 2d ed. Chicago: Year Book Medical Publications, Inc., 1984.

Hall, Sandra P. and Felice L. Hirsch. Fingertip Reference for Dental Materials. Orlando: Delmar, 1981.

Kinn, E. Mary. Medical Terminology Review Challenge. Orlando: Delmar, 1987.

Pattison, Gordon, and Anna Pattison. Periodontal Instrumentation: A Clinical Manual. Old Tappan, N.J.: Reston, 1985.

Short, J. Marjorie. Essential Oral Anatomies: Teeth, Head, and Neck. Orlando: Delmar, 1987.

Torres, J. and A. Ehrlich. Modern Dental Assisting and Workbook. Orlando: W. B. Saunders Co., 1985.

Wilkins, Esther. Clinical Practice of the Dental Hygienist. 6th ed. Philadelphia: Lea and Febiger, 1989.

Woodall, Irene. Comprehensive Dental Hygiene Care. 2d ed. St. Louis: C. V. Mosby, 1985.

Zwemer, Thomas J., ed. Boucher's Current Clinical Dental Terminology. 3d ed. St. Louis: C. V. Mosby, 1982.

ERIC Data Base

Branson, Bonnie. Clinical Guidelines. Dental Hygiene Program. Carbondale: Southern Illinois University, 1985 (ED 260183).

Foster, Philip R. Resource Guide to Competency-Based Vocational Education: Health Occupations. College Park: Maryland Vocational Curriculum Research and Development Center, 1980 (ED 205694).

Graf, Sandra Kovacs. Managing Dental Office Records. Student's Manual and Instructor's Guide. University of Texas at Austin: Extension Instruction and Materials Center, 1984 (ED 260188).

Hayes, Gary E., et al. Health Instruction Packages: Dental Personnel. Battle Creek: Kellogg Foundation, 1976 (ED 202543).

Hill, Carol L. Vocational Instructional Materials for Allied Health Education Available from Federal Agencies. Washington: Human Resources Management, Inc., 1980 (ED 190912).

Johnson County Community College, Overland Park, Kansas, and Office of Institutional Research, League for Innovation in the Community College, Los Angeles, California. Issues in Dental Hygiene and Practice: Perceptions and Concerns of Dental Hygiene Program Administrators. 1983 (ED 238488).

New York. State Education Department. Office of the Professions. Dentistry and Dental Hygiene Handbook. Albany, 1984 (ED 253181).

Journal Articles

Cohen, Leonard, et al. "Educational preparation of hygienists working with special populations in nontraditional settings." Journal of Dental Education 49 (August 1985): 592-95.

Gluch-Scranton, Joan, and JoAnn R. Gurenlian. "A model for two-year and baccalaureate clinical dental hygiene education." Journal of Dental Education 49 (February 1985): 95-99.

Jong, Anthony, and Carol-Sue Heine. "The teaching of ethics in the dental hygiene curriculum." Journal of Dental Education 46 (December 1982): 699-702.

Ley, Eugene, et al. "Maintenance of an adequate dental hygiene education system." Journal of Dental Education 48 (October 1984): 556-59.

Rakowski, William, et al. "Dental hygiene students' future orientation and perceptions of old age and older persons." Journal of Dental Education 49 (August 1985): 592-95.

Rubinstein, Linda, and Marcia K. Brand. "A description of postcertification dental hygiene programs." Journal of Dental Education 50 (October 1986): 608-10.

Scott, Ruth L., et al. "The inquiry approach in dental hygiene education." Journal of Dental Education 49 (May 1985): 287-94.

Audiovisual Aids

Coronet Instructional Films (producers). Brushing and Flossing Techniques. 16mm film, or 3/4 or 1/2 inch videocassette, 8 min. 1983. Distributed by Simon and Schuster, 108 Wilmot Road, Deerfield, Ill. 60015.

Dental Anatomy Series. Ann Arbor: University of Michigan School of Dentistry. 3/4 inch videotape.

Dental Material. Kansas City: University of Missouri at Kansas City, School of Dentistry, 3/4 inch videotape.

Radiography Series. St. Louis: C. V. Mosby. Multimedia (slide/tape).

Veterans Administration Medical Center, Northport, N.Y. (producers). Forget Me Not: Oral Care for the Bedridden Patient. 3/4 or 1/2 inch videocassette, 11 min. 1982. Distributed by U.S. National Audiovisual Center, General Services Administration, Washington, D.C. 20409.

Institution-Developed Materials

Student learning guides or modules have been developed at Palm Beach Community College. Topics include the Dental Hygiene Clinic, Preventive Dentistry, Community Dentistry, and Clinical Practice.

FEIS Services

The Florida Educational Information Service (FEIS) can tailor its services to meet your needs for information on any of the following:

1. information about copyright
2. a list of instructors teaching a particular vocational education program in Florida
3. journal articles or project reports on specific topics
4. curriculum and instructional materials
5. information on current trends, issues, and research

Please feel free to contact FEIS at:

Center for Instructional Development and Services
College of Education
Florida State University
2003 Apalachee Parkway
Tallahassee, Florida 32301
(904) 487-2054

APPENDIX: SAMPLE STUDENT LEARNING GUIDE

*STUDENT LEARNING GUIDE

Program: Dental Hygiene

Topic: Anesthetics

Outcome: Identify the Functions of Anesthetics

Student Performance Standards:

05.03 Identify drug actions, side effects, indications, and contraindications.
05.04 Identify common drugs used in dentistry.
05.05 Prepare and apply a topical anesthetic agent.
05.06 Identify properties of anesthetics.
05.07 Prepare syringes for the administration of local anesthetics.

Introduction: In this learning guide, you will learn about different types of anesthetics, when to use them, and the preparations for their use in a clinical setting. (In the guide to follow, you would help administer a local anesthetic to a patient.)

*Adapted from materials provided by Palm Beach Community College. This guide is not complete, but has been prepared to illustrate a suggested format for a learning guide.

OBJECTIVES

Knowledge Objectives

After completing this learning guide, you will be able to:

1. define the following: anesthesia, topical anesthetic, local anesthetic, general anesthetic
2. describe the action of vasoconstrictors in local anesthetics and list two reasons for their use
3. list two contraindications for the use of vasoconstrictors
4. name the two most commonly used vasoconstrictors
5. state the two most commonly used types of anesthetic solutions, giving both brand name and generic name
6. define aspiration and explain its necessity in administering local anesthetic
7. define the gauge of a needle and explain the significance of the numbers that are used to designate gauge
8. list five reactions to watch for after the administration of an anesthetic
9. state two reasons for recording anesthetic procedure and name the type of anesthetic used on a patient's chart
10. describe two possible types of allergic hypersensitivity to local dental anesthetics
11. define toxicity and describe a toxic reaction to local dental anesthesia
12. identify three principal methods of injection and when each is used
13. etc. (list has been abbreviated)

Task

After completing this learning guide, you will be able to:

prepare for the administration of a topical and local anesthetic.

Enabling Performance Objectives

Assemble the armamentarium.
Prepare and set up a topical anesthetic.
Prepare and set up a local anesthetic syringe.

Given: potential armamentarium (tools and supplies) in a clinical setting

You will: assemble the necessary armamentarium, prepare and set up a topical anesthetic, and prepare and set up a local anesthetic syringe.

How well: so that you will be checked as satisfactory on all steps of the skills test

LIST OF RESOURCES

Wilkins, Esther M. Clinical Practice of the Dental Hygienist. Philadelphia: Lea & Febiger, 1983.

Torres, Hazel O. and Ehrlich, Ann. Modern Dental Assisting. 3d ed. and Workbook. Orlando, Fla.: W. H. Saunders Co., 1985.

Slide Tape Series: Preparing and administering topical anesthetic

Transparencies

Information Sheet (attached)

Skills Activity Sheets nos. 1 through 3 (attached)

Carpenter, Bruce, Julie Cave, and E. Joy Hill, comp. A Catalog of Performance Objectives, Criterion-Referenced Measures, and Performance Guides for Dental Assistant. Adapted by Career Education Center, Tallahassee, Fla.: Florida Department of State, 1976.

LEARNING ACTIVITIES

Objectives 1-2	1. Read pp. 521-523 and 580 of the Wilkins text.
Objectives 3-12	2. Read the Information Sheet.
	3. Check your knowledge about local anesthetics by taking the self-check, and check your answers with the answer key that follows it.
Objectives 13-end	4. etc.
Performance Objectives	5. Watch the appropriate slide tape series.
	6. Watch the demonstration of skills by your instructor.
	7. Do Skills Activity Sheets #1-3.
	8. Complete the unit test, parts 1 and 2.

Local Anesthetics

I. Types of Solutions

A. Xylocaine = 2% Lidocaine

B. Carbocaine = 2% Maprivacaine

These anesthetics are the most commonly used and have rapid onset action. Usually last 90-180 minutes.

II. Vasoconstrictors

A. Most Common

1. Epinephrine with Lidocaine 1:100,000 or 1:50,000
2. Neo-Cobefrin with Meprivacaine 1:100,000 or 1:50,000

B. Action on Blood Vessels
Contracts the blood vessels, reducing the blood flow.

C. Advantages
Retards the absorption of the anesthetic solution into the bloodstream. Keeps the anesthetic at the injection site longer. Gives longer and more profound anesthesia time.

D. Contraindications

1. Anyone with an allergic reaction to anesthetics.
2. Any patient with heart problems.

E. Toxic Effects
Toxic effects are usually reduced because the amount of anesthetic used cannot enter the bloodstream rapidly and be carried to the brain in great enough quantity to produce a toxic effect.

III. Carpules

A. Design
Glass tube with metal cap with rubber center for needle and rubber stopper for harpoon insertion.
1.8 ml. of anesthetic.

B. Epinephrine Content (color of stopper)

1. Red = xylocaine 1:100,000
2. Green = xylocaine 1:50,000
3. Orange = carbocaine 1:20,000
4. White = carbocaine with vasoconstrictor

IV. Needles

A. Short
1 inch used for infiltration and field blocks.

B. Long
1 and 5/8 inch used for nerve blocks.

C. Diameter
Gauge = diameter of a needle. The most common gauges used are 23, 25, 27, and 30. The lower the number of gauge, the larger the diameter of the needle shaft.

V. Syringes

The most widely used syringe design is the metal breech-loading aspirating syringe with a harpoon-type plunger.

All local anesthetics are potentially toxic to the central nervous system if injected in sufficient quantities into the bloodstream. This can occur if the needle is placed inadvertently into a blood vessel and solution is injected directly into the bloodstream. To prevent this from occurring the dentist must apply back pressure in the plunger after needle placement. If the needle is in a blood vessel, blood will be drawn into the anesthetic cartridge. This is called ASPIRATION. This is not as important in infiltration and field block as in a nerve block because of the larger vessels that are located deep in the tissues near main nerve trunks.

Three Principal Injection Methods:

1. Infiltration	Tiny terminal nerve branches throughout living tissue. Used for soft tissue surgery like curettage.
2. Field Block	Larger terminal nerve branches. Used for Maxillary teeth and bone and Mandibular anterior teeth and bone.
3. Nerve Block	Near a main nerve trunk. Will prevent passage of pain from site of injection to the brain. Larger areas than infiltration and field block. The most common is the Mandibular nerve block--Inferior alveolar nerve which supplies all Mandibular teeth and surrounding bone. Needle is placed near the Mandibular Foramen on the mesial aspect of the ramus.

SELF-CHECK

Directions: Answer the following briefly. You may refer to reading materials.

1. Define topical anesthetic.

2. Define general anesthetic.

3. List two reasons why vasoconstrictors are used in local anesthetics.

   a. _____

   b. _____

4. List two contraindications for the use of vasoconstrictors.

   a. _____

   b. _____

5. List two commonly used vasoconstrictors.

   a. _____

   b. _____

6. State two types of anesthetic solutions, giving both common and generic names.

   a. _____

   b. _____

7. Define the gauge of a needle and explain the significance of the numbers used to designate gauge.

8. (Self-check would continue matching the objectives listed.)

Now check your answers with the answer key on the following page.

SELF-CHECK ANSWER KEY

1. **Topical anesthetic:** a drug that is applied to the surface of tissues and produces a loss of feeling in that tissue area; used prior to the insertion of a hypodermic needle.

2. **General anesthetic:** a drug or gas that produces unconsciousness, either by inhalation (ether, chloroform) or by injection (sodium pentothal).

3. You should have two of the following:

   a. Retards the absorption of the anesthetic solution into the bloodstream.
   b. Keeps the anesthetic at the injection site longer.
   c. Gives longer and more profound anesthesia time.

4. Contraindications

   a. Anyone with an allergic reaction to anesthetics.
   b. Any patient with heart problems.

5. Most Common Vasoconstrictors:

   a. Epinephrine with Lidocaine 1:100,000 or 1:50,000
   b. Neo-Cobefrin with Meprivacaine 1:100,000 or 1:50,000

6. Types of Solutions

   a. Xylocaine = 2% Lidocaine
   b. Carbocaine = 2% Meprivacaine

7. Gauge of a needle is its diameter; the lower the number, the larger the diameter.

8. etc.

Your answers should agree with the above. If you have made any errors, read the resource material again and/or seek help from your instructor.

When you have successfully completed the self-check and review, continue with the skills activity practices on the following pages.

SKILLS ACTIVITY SHEET #1

For Performance Objective: Assemble the armamentarium.

Directions: Your performance will be evaluated based on the information and the steps given below.

Assemble the following materials, using aseptic technique at all times.

1. Sterile aspirating syringe
2. Disposable needle (proper gauge)
3. Carpule of proper anesthetic
4. 4 sterile 2x2 gauze sponges
5. Sterile cotton swab
6. A topical anesthetic ointment
7. Tray or bracket table

NOTE: If a patient has a heart condition or medical problem contraindicating an anesthetic with vasoconstrictor, then an anesthetic without vasoconstrictor (epinephrine) is used.

When you are confident that you are able to assemble the armamentarium, go on to Skills Activity Sheet #2.

SKILLS ACTIVITY SHEET #2_____

For Performance Objective: prepare and set up a topical anesthetic.

Directions: Your performance will be evaluated based on the steps given below.

Be sure that you:

1. Insert cotton swab tip into topical anesthetic ointment.
2. Fold a 2x2 sterile gauze sponge around cotton swab tip that contains ointment.
3. Place prepared cotton swab on tray or bracket table.

When you are confident that you can prepare and set up a topical anesthetic, go on to Skills Activity Sheet #3.

SKILLS ACTIVITY SHEET #3

For Performance Objective: prepare and set up a local anesthetic syringe.

Directions: Your performance will be evaluated based on the steps given below. Observe a demonstration by your instructor. Practice these steps until you can do them easily.

Be sure that you:

1. Inspect aspirating syringe for any defects.
2. Inspect carpules of anesthetic for deterioration or contamination of solution.
3. Place carpule into side of syringe by pulling back on plunger and sliding carpule, needle end first, into syringe. Red stopper should be closest to the plunger, and rubber stopper with metal cap towards the harpoon. Release plunger rod.
4. Mount needle into narrow end of syringe by twisting into cap.
5. Engage harpoon into carpule by applying rapid thumb pressure to the thumb ring of flat end of plunger, or tapping end of the finger rest with the palm of your hand.
6. Remove protective shield from needle and expel several drops of solution to remove air from carpule.
7. Check bevel position of needle to facilitate the placement of bevel towards bone.
8. Replace protective shield on needle.
9. Place prepared syringe on tray or bracket table.

When you can do these three skills, ask your instructor for the unit test: Part 1—Knowledge Test; Part 2—Skills (Performance) Test.

***UNIT TEST PART I--KNOWLEDGE TEST**_____

Directions: On a separate sheet of paper, record your answers to the following questions. For the multiple-choice questions, write the letter of your choice. You may refer to material in this guide while taking this test.

1. What is the definition of anesthesia?

2. What is the definition of local anesthetic?

3. One of the most common vasoconstrictors is Neo-Cobefrin with Meprivacaine; the other is _____ with _____.

4. a. Xylocaine, also called _____, is one of the most commonly used solutions.

   b. Carbocaine, also called _____, is the other commonly used solution.

5. Aspiration is defined as _____

   _____.

6. If one needle gauge is 23 and the other is 27, which needle shaft has the larger diameter?

7. Which of the following injection methods would be used for maxillary teeth and bone?

   a. infiltration
   b. field block
   c. nerve block

8. Which of the following injection methods would be used for mandibular teeth and surrounding bone?

   a. infiltration
   b. field block
   c. nerve block

9. etc. (sample test has been shortened)

Return this part of the unit test to your instructor. Next, request that you be checked off on your skills in preparing for the administration of a topical and local anesthetic.

*to be copied for each student by the instructor

UNIT TEST PART I--ANSWER KEY

Instructor's Copy

1. Anesthesia: loss of bodily feeling due to receiving an anesthetic.

2. Local anesthetic: a drug that when injected into the tissues and absorbed into a nerve will temporarily cause loss of feeling in the area supplied by that nerve.

3. Epinephrine with Lidocaine

4. a. 2% Lidocaine
   b. 2% Meprivacaine

5. Aspiration is defined as the drawing of blood into the anesthetic cartridge by applying back pressure in the plunger after needle placement.

6. Gauge 23

7. b

8. c

9. etc.

UNIT TEST PART 2--SKILLS TEST

Directions: Sign up with your instructor for one hour of time. You will demonstrate your skills in preparing for the administration of a topical and local anesthetic, which includes assembling the armamentarium, preparing and setting up a topical anesthetic, and preparing and setting up a local anesthetic syringe.

UNIT TEST PART 2--SKILLS TEST_____

Evaluator's Copy

Student's Name: _____

Evaluator: _____ Date _____

Results: _____ Mastery Achieved _____ Not Achieved

Directions: Please check off each step in the following procedures as the student performs. Do not make verbal comments to the student.

Task	**Evaluator's Ratings** Yes	No
Assembled the armamentarium, including the following:		
1. Sterile aspirating syringe.	____	____
2. Disposable needle (proper gauge).	____	____
3. Carpule of proper anesthetic.	____	____
4. 4 sterile 2x2 gauze sponges.	____	____
5. Sterile cotton swab.	____	____
6. A topical anesthetic ointment.	____	____
7. Tray or bracket table.	____	____
8. Used aseptic techniques at all times.	____	____
Prepared and set up a topical anesthetic.		
1. Inserted cotton swab tip into topical anesthetic ointment.	____	____
2. Folded a 2x2 sterile gauze sponge around cotton swab tip that contains ointment.	____	____
3. Placed prepared cotton swab on tray or bracket table.	____	____

Task	Evaluator's Ratings Yes	No
Prepared and set up a local anesthetic syringe.		
1. Inspected aspirating syringe for any defects.	____	____
2. Inspected carpules of anesthetic for deterioration or contamination of solution.	____	____
3. Placed carpule into side of syringe by pulling back on plunger and sliding carpule, needle end first, into syringe. Red stopper should be closest to the plunger, and rubber stopper with metal cap towards the harpoon. Released plunger rod.	____	____
4. Mounted needle into narrow end of syringe by twisting into cap.	____	____
5. Engaged harpoon into carpule by applying rapid thumb pressure to the thumb ring of flat end of plunger, or tapping end of the finger rest with palm of hand.	____	____
6. Removed protective shield from needle and expelled several drops of solution to remove air from carpule.	____	____
7. Checked bevel position of needle to facilitate the placement of bevel towards bone.	____	____
8. Replaced protective shield on needle.	____	____
9. Placed prepared syringe on tray or bracket table.	____	____

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education

DVACE/07/89/175 123456789/89 HO 182 BK 89